

WHAT IS CLAIMED IS

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1. An electronic equipment having parts which may be subjected to maintenance and are specified by a maintenance range, comprising:

10 a setting part which is set with a predetermined maintenance range in which the maintenance is permitted;

an authenticating part to authenticate validity of a maintenance-attending person for the electronic equipment; and

15 a changing part to temporarily change the predetermined maintenance range set in said setting part, in response to a change instruction, when said authenticating part authenticates the validity of the maintenance-attending person.

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2. The electronic equipment as claimed in claim 1, wherein said setting part is preset with a maintenance range for each maintenance person.

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3. The electronic equipment as claimed in  
claim 1, wherein said authenticating part authenticates  
the validity of the maintenance-attending person using  
an authenticating medium which stores authentication  
5 information of the maintenance-attending person.

10 4. The electronic equipment as claimed in  
claim 1, wherein said changing part adds a maintenance  
range specified by the change instruction only for a  
period of time specified by the change instruction, with  
respect to the predetermined maintenance range.

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5. The electronic equipment as claimed in  
20 claim 1, wherein said setting part is also set with a  
predetermined management range in which management is  
permitted, and said changing part also temporarily  
changes the predetermined management range set in said  
setting part, in response to the change instruction,  
25 when said authenticating part authenticates the validity

of the maintenance-attending person.

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6. The electronic equipment as claimed in claim 1, further comprising:

an input part to permit input of the change instruction by an operator whose validity is  
10 authenticated.

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7. An equipment managing apparatus for controlling an electronic equipment which includes a setting part which is set with a predetermined maintenance range in which maintenance is permitted, a first authenticating part to authenticate validity of a  
20 maintenance-attending person for the electronic equipment, and a changing part to temporarily change the predetermined maintenance range set in the setting part in response to a change instruction when the first authenticating part authenticates the validity of the  
25 maintenance-attending person, said equipment managing

apparatus comprising:

a second authenticating part to authenticate validity of an operator of the equipment managing apparatus;

5 an input part to permit input of the change instruction when the second authenticating part authenticates the validity of the operator; and

a part to supply the change instruction input from said input part to the electronic equipment.

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8. The equipment managing apparatus as  
15 claimed in claim 7, wherein said second authenticating part authenticates the validity of the operator using an authenticating medium which stores authentication information of the operator.

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9. An equipment maintenance system for  
controlling a maintenance range in which maintenance of  
25 an equipment may be performed, comprising:

a setting part to set in advance a maintenance range in which the maintenance of the equipment is permitted;

5 a first authenticating part to authenticate validity of a maintenance-attending person for the equipment; and

a changing part to temporarily change the set maintenance range to a predetermined maintenance range based on an authentication result of said first authenticating part, so that the maintenance of the equipment is temporarily permitted within the predetermined maintenance range.

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10. The equipment maintenance system as claimed in claim 9, wherein said setting part is provided within a maintenance service provider which provides maintenance services for the equipment or, within a setup site of the equipment.

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11. The equipment maintenance system as  
claimed in claim 9, wherein said changing part is  
provided within a maintenance service provider which  
provides maintenance services for the equipment or,  
5 within a setup site of the equipment.

10 12. The equipment maintenance system as  
claimed in claim 11, wherein said changing part is  
provided in an apparatus within the maintenance service  
provider, and said apparatus is communicatable with the  
equipment via a network.

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13. The equipment maintenance system as  
20 claimed in claim 11, wherein said changing part is  
provided in an apparatus within the maintenance service  
provider or, provided within the equipment, and said  
apparatus is communicatable with the equipment via a  
network.

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14. The equipment maintenance system as claimed in claim 9, further comprising:

a second authenticating part to authenticate validity of an operator of said changing part.

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15. The equipment maintenance system as claimed in claim 14, wherein said second authenticating part authenticates the validity of the operator using an authenticating medium which stores authentication information of the operator.

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16. The equipment maintenance system as claimed in claim 9, wherein said first authenticating part authenticates the validity of the maintenance-attending person using an authenticating medium which stores authentication information of a maintenance person.

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17. The equipment maintenance system as claimed in claim 9, wherein said setting part sets in advance a maintenance range for each maintenance person.

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18. The equipment maintenance system as claimed in claim 9, further comprising:

10       a maintenance part to perform maintenance of the equipment within the predetermined maintenance range.

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19. The equipment maintenance system as claimed in claim 18, wherein said maintenance part is provided in an apparatus within a maintenance service provider which provides maintenance services for the  
20       equipment, and said apparatus is communicatable with the equipment via a network to perform remote maintenance of the equipment.

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20. The equipment maintenance system as  
claimed in claim 18, wherein said maintenance part is  
provided within an apparatus in a setup site of the  
equipment or, within the equipment, and said apparatus  
5 is communicatable with the equipment via a network.

10 21. The equipment maintenance system as  
claimed in claim 9, wherein the equipment is selected  
from a group consisting of information processing  
apparatus, office automation (OA) equipment, point-of  
sales (POS) terminal equipment, medical equipment,  
15 vending machine, electrical home appliance, and portable  
terminal equipment.

20 22. An equipment maintenance method for  
controlling a maintenance range in which maintenance of  
an equipment may be performed, comprising the steps of:  
(a) setting in advance a maintenance range in  
25 which the maintenance of the equipment is permitted;

(b) authenticating validity of a maintenance-  
attending person for the equipment; and

(c) temporarily changing the set maintenance range  
to a predetermined maintenance range based on an  
5 authentication result of said step (b), so that the  
maintenance of the equipment is temporarily permitted  
within the predetermined maintenance range.

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23. The equipment maintenance method as  
claimed in claim 22, wherein said step (a) is performed  
within a maintenance service provider which provides  
15 maintenance services for the equipment or, within a  
setup site of the equipment.

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24. The equipment managing method as claimed  
in claim 22, wherein said step (c) is carried out within  
a maintenance service provider which provides  
maintenance services for the equipment or, within a  
25 setup site of the equipment.

25. The equipment managing method as claimed  
in claim 24, wherein said step (c) is carried out in an  
apparatus within the maintenance service provider, and  
said apparatus is communicatable with the equipment via  
5 a network.

10 26. The equipment maintenance method as  
claimed in claim 24, wherein said step (c) is carried  
out in an apparatus within the maintenance service  
provider or, provided within the equipment, and said  
apparatus is communicatable with the equipment via a  
15 network.

20 27. The equipment maintenance method as  
claimed in claim 22, further comprising the steps of:  
(d) authenticating validity of an operator of said  
changing part.

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28. The equipment maintenance method as  
claimed in claim 27, wherein said step (d) authenticates  
the validity of the operator using an authenticating  
medium which stores authentication information of the  
5 operator.

10 29. The equipment maintenance method as  
claimed in claim 22, wherein said step (b) authenticates  
the validity of the maintenance-attending person using  
an authenticating medium which stores authentication  
information of a maintenance person.

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30. The equipment maintenance method as  
20 claimed in claim 22, wherein said step (a) sets in  
advance a maintenance range for each maintenance person.

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31. The equipment maintenance method as claimed in claim 22, further comprising the steps of:

(e) carrying out maintenance of the equipment within the predetermined maintenance range.

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32. The equipment maintenance method as claimed in claim 31, wherein said step (e) is carried out in an apparatus within a maintenance service provider which provides maintenance services for the equipment, and said apparatus is communicatable with the equipment via a network to perform remote maintenance of the equipment.

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33. The equipment maintenance method as claimed in claim 31, wherein said step (e) is carried out within an apparatus in a setup site of the equipment or, within the equipment, and said apparatus is communicatable with the equipment via a network.

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34. The equipment maintenance method as  
claimed in claim 22, wherein the equipment is selected  
from a group consisting of information processing  
apparatus, office automation (OA) equipment, point-of  
5 sales (POS) terminal equipment, medical equipment,  
vending machine, electrical home appliance, and portable  
terminal equipment.

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35. An electronic equipment having parts  
which may be subjected to maintenance and are specified  
by a maintenance range, comprising:

15        setting means set with a predetermined maintenance  
range in which the maintenance is permitted;

          authenticating means for authenticating validity of  
a maintenance-attending person for the electronic  
equipment; and

20        changing means for temporarily changing the  
predetermined maintenance range set in said setting  
means, in response to a change instruction, when said  
authenticating means authenticates the validity of the  
maintenance-attending person.

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36. An equipment managing apparatus for  
controlling an electronic equipment which includes  
setting means set with a predetermined maintenance range  
in which maintenance is permitted, first authenticating  
5 means for authenticating validity of a maintenance-  
attending person for the electronic equipment, and  
changing means for temporarily changing the  
predetermined maintenance range set in the setting part  
in response to a change instruction when the first  
10 authenticating means authenticates the validity of the  
maintenance-attending person, said equipment managing  
apparatus comprising:

second authenticating means for authenticating  
validity of an operator of the equipment managing  
15 apparatus;

input means for permitting input of the change  
instruction when the second authenticating means  
authenticates the validity of the operator; and

means for supplying the change instruction input  
20 from said input means to the electronic equipment.

25 37. An equipment maintenance system for

controlling a maintenance range in which maintenance of an equipment may be performed, comprising:

5        setting means for setting in advance a maintenance range in which the maintenance of the equipment is permitted;

         authenticating means for authenticating validity of a maintenance-attending person for the equipment; and

         changing means for temporarily changing the set maintenance range to a predetermined maintenance range  
10        based on an authentication result of said authenticating means, so that the maintenance of the equipment is temporarily permitted within the predetermined maintenance range.

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         38. A computer-readable storage medium which stores a program for causing a computer to set a  
20        maintenance range which specifies parts of an electronic equipment which may be subjected to maintenance, said program comprising:

         a setting procedure causing the computer to be set with a predetermined maintenance range in which the  
25        maintenance is permitted;



an authenticating procedure causing the computer to authenticate validity of a maintenance-attending person for the electronic equipment; and

5 a changing procedure causing the computer to temporarily change the predetermined maintenance range set in said setting procedure, in response to a change instruction, when said authenticating procedure authenticates the validity of the maintenance-attending person.

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39. A computer-readable storage medium which  
15 stores a program for causing a computer to manage an electronic equipment which includes a setting part set with a predetermined maintenance range in which maintenance is permitted, an authenticating part to authenticate validity of a maintenance-attending person  
20 for the electronic equipment, and a changing part to temporarily change the predetermined maintenance range set in the setting part in response to a change instruction when the authenticating part authenticates the validity of the maintenance-attending person, said  
25 program comprising:

an authenticating procedure causing the computer to authenticate validity of an operator of the computer;

an input procedure causing the computer to permit input of the change instruction when the authenticating  
5 procedure authenticates the validity of the operator;  
and

a procedure causing the computer to supply the change instruction input by said input procedure to the electronic equipment.

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40. A computer-readable storage medium which  
15 stores a program for causing a computer to control a maintenance range in which maintenance of an equipment may be performed, said program comprising:

a setting procedure causing the computer to set in advance a maintenance range in which the maintenance of  
20 the equipment is permitted;

an authenticating procedure causing the computer to authenticate validity of a maintenance-attending person for the equipment; and

a changing procedure causing the computer to  
25 temporarily change the set maintenance range to a

predetermined maintenance range based on an authentication result of said authenticating procedure, so that the maintenance of the equipment is temporarily permitted within the predetermined maintenance range.

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